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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,623	11/25/2003	James R. Klotz	706773US1	7706

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EXAMINER

ESHETE, ZELALEM

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 05/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/721,623	Applicant(s) KLOTZ, JAMES R.	
	Examiner Zelalem Eshete	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This Office Action is in response to the amendment filed on 4/13/2006.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,2,5 are rejected under 35 U.S.C. 102(b) as being anticipated by Ravenel (3,531,234).

Regarding claim 1: Ravenel discloses a rocker system for actuating valve lift events of an internal combustion engine (see figure 1), the rocker system comprising: a rocker arm (see numeral 40), an actuator link in constant driving engagement with the rocker arm and a camshaft (see numeral 60,70); a rocker shaft positioned in a cylinder head and oriented to have a rotational axis substantially perpendicular to a rotational axis of the camshaft (see column 2, lines 47 to 55), wherein rocker arm is arranged to be rotated about the rocker shaft and engage a valve to actuate valve lift events of the internal combustion engine (see figure 1).

Regarding claim 2: Ravenel discloses the actuator link comprises a push rod (see figure 1; column 2, line 61 to 63).

Regarding claim 5: Ravenel discloses the rotational axis of the rocker shaft is oriented to be substantially parallel to a cylinder block deckface, in that, Ravenel discloses the rocker shaft axis orientation that includes its being parallel to a cylinder block deckface (see column 2, lines 47 to 55).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3,4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ravenel in view of Kawasaki (6,250,269).

Ravenel discloses the claimed invention as recited above; however fails to disclose the rocker arm/intake rocker arm is arranged to rotate about the rocker shaft and drivingly engage more than one valve/intake valve.

However, Kawasaki teaches the rocker arm/intake rocker arm is arranged to rotate about the rocker shaft and drivingly engage more than one valve/intake valve (see figure 7, numerals 22,26; column 4, lines 1 to 3).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the rocker arm of Ravenel by providing plural valve actuating means as taught by Kawasaki in order to actuate engines of a plurality of inlet valves for a given cylinder without additional moving part as taught by Kawasaki.

5. Claims 3,4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ravenel in view of Konno (4,848,284).

Regarding claims 3,4: Ravenel discloses the claimed invention as recited above; however fails to disclose the rocker arm/intake rocker arm is arranged to rotate about the rocker shaft and drivingly engage more than one valve/intake valve.

However, Konno teaches the rocker arm/intake rocker arm is arranged to rotate about the rocker shaft and drivingly engage more than one valve/intake valve (see figure 6; column 4, lines 45 to 57).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the rocker arm of Ravenel by providing plural valve actuating means as taught by Konno in order to actuate engines of a plurality of inlet valves for a given cylinder without additional moving part as taught by Konno.

6. Claims 6,7,9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ravenel in view of Nakayama (6,748,913).

Regarding claim 6: Ravenel discloses the claimed invention as recited above; however, fails to disclose intake and exhaust rocker arms arranged to rotate about the rocker shaft, wherein the exhaust rocker arm is coupled about the rocker shaft so as to be nested within the intake rocker arm while allowing independent rotation of the intake and exhaust rocker arms.

However, Nakayama teaches intake and exhaust rocker arms arranged to rotate about the rocker shaft (see abstract), wherein the exhaust rocker arm is coupled about the rocker shaft so as to be nested within the intake rocker arm while allowing independent rotation of the intake and exhaust rocker arms (see figure 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Ravenel by providing a single rocker shaft arrangement for actuating intake and exhaust valves as taught by Nakayama in order to minimize the number of parts by integrating the exhaust/intake rocker arms onto one shaft thereby improve design for manufacture of the machine.

Regarding claim 7: Ravenel discloses the actuator link comprises a push rod (see figure 1; column 2, line 61 to 63).

Regarding claim 9: Ravenel discloses the rotational axis of the rocker shaft is oriented to be substantially parallel to a cylinder block deckface, in that, Ravenel discloses the rocker shaft axis orientation that includes its being parallel to a cylinder block deckface (see column 2, lines 47 to 55).

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ravenel as modified above in view of Kawasaki (6,250,269).

Ravenel as modified above discloses the claimed invention as recited above; however fails to disclose the rocker arm is arranged to drivingly engage more than one valve.

However, Kawasaki teaches the rocker arm is arranged to drivingly engage more than one valve (see figure 7, numerals 22,26; column 4, lines 1 to 3).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the rocker arm of Ravenel as modified above by providing plural valve actuating means as taught by Kawasaki in order to actuate engines of a plurality of inlet valves for a given cylinder without additional moving part as taught by Kawasaki.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ravenel as modified above in view of Konno (4,848,284).

Ravenel as modified above discloses the claimed invention as recited above; however fails to disclose the rocker arm is arranged to drivingly engage more than one valve.

However, Konno teaches the rocker arm is arranged to drivingly engage more than one valve (see figure 6; column 4, lines 45 to 57).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the rocker arm of Ravenel as modified above by providing plural valve actuating means as taught by Konno in order to actuate engines of a plurality of inlet valves for a given cylinder without additional moving part as taught by Konno.

Response to Arguments

9. Applicant's arguments filed 4/13/2006 have been fully considered but they are not persuasive.

10. With respect to applicant's argument on page 4: Ravenel discloses the axis XX can be perpendicular to axis ZZ. Applicant's assertion is based on figure 1. However, applicant is directed to Ravenels (see column 2, lines 47 to 55) as discussed in the office action above which form the basis of the response to argument as recited below.

11. Ravenels discloses the following conditions:

- a. YY is perpendicular to ZZ
- b. YY is perpendicular to XX
- c. XX is perpendicular to UU
- d. XX may be chosen arbitrarily provided only that it is perpendicular to UU

12. Therefore when the plane of UU is rotated 90 degrees about axis Y:

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- e. XX is perpendicular to UU (condition for moving XX)
- f. YY is still perpendicular to XX (rotate about axis Y)
- g. YY is still perpendicular to ZZ (YY and ZZ are remain stationary)
- h. Therefore, XX is perpendicular to ZZ (reads on claimed invention)

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

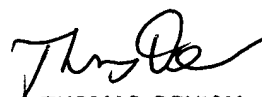
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zelalem Eshete whose telephone number is (571) 272-4860. The examiner can normally be reached on Monday to Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system: Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Zelalem Eshete
Examiner
Art Unit 3748



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